1. Identification of the Product and Company

Product Name: ISOPROPYL ALCOHOL 70% STERILE

Product Code: ISO01810F

Other Names: None allocated

Use:
Isopropyl Alcohol is a bactericidal hospital grade disinfectant suitable for general purpose disinfection and hospital equipment or surfaces not likely to come into contact with broken skin. Do not use on therapeutic devices.

Company Name & Contact Details
Distributed by Perrigo Australia
Orion Laboratories Pty. Ltd., trading as Perrigo Australia
ABN 56 009 293 136
25-29 Delawney Street, Balcatta, Western Australia 6021 AUSTRALIA
Telephone (all hours): +61 8 9441 7800
FREE PHONE: 1800 805 546 FREE FAX: 1800 004 110
EMAIL: customerservice@perrigo.com.au; WEBSITE: www.perrigo.com.au

ORION is a registered trademark of Orion Laboratories Pty Ltd

All reasonable care has been taken to ensure information and advice contained in this data sheet is accurate at time of printing. However, Orion accepts no liability for any loss or damages suffered as a consequence of reliance on the information contained herein.

2. Hazards Identification

Hazard Classification
HAZARDOUS SUBSTANCE – DANGEROUS GOOD
DG Class 3 Packaging Group II

Risk phrase(s)
R11 – Highly flammable; R20/22 – Harmful by inhalation and if swallowed.
R36/38 – Irritating to eyes and skin; R66 – Repeated exposure may cause skin dryness and cracking.

Safety phrase(s)
S7/9 – Keep container tightly closed and in a well ventilated place; S16 – Keep away from sources of ignition – No smoking; S23 – Do not breathe vapour; S24/25 – Avoid contact with skin and eyes; 29 – Do not empty into drains; S33 – Take precautionary measures against static discharges; S36/37/39 – Wear suitable protective clothing/ gloves and eye/face protection.; S45 – In case of accident or if you feel unwell seek medical advice immediately (show the label whenever possible.)

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Entity</th>
<th>CAS No.</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>70% v/v</td>
</tr>
<tr>
<td>Water, Purified</td>
<td>7732-18-5</td>
<td>to 100%</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Inhalation: Remove patient to fresh air and seek medical advice if necessary. If breathing should stop, apply artificial respiration immediately. If there are signs of intoxication, irritation, dizziness or nausea seek medical attention.

Ingestion: Rinse mouth out with water and give plenty of water to drink. Seek medical attention. Do not attempt to induce vomiting or give anything by mouth to an unconscious person. If poisoning occurs, contact a doctor of Poisons Information Centre (Australia 13 11 26).

Skin: Remove contaminated clothing. Wash with water. If irritation occurs, seek medical advice. Launder clothing before re-use.

Eye: Flush eyes with gently running water for at least 15 minutes (hold eyes open). Seek medical attention promptly if irritation persists or any loss of vision occurs.

Advice to Doctor: Treat symptomatically as for narcotic substance. If respiration is depressed, assisted respiration may be necessary.
## 5. Fire Fighting Measures

**Specific Hazards**
Highly flammable liquid. May form flammable mixtures with air. Burns with a colourless flame. Vapour is heavier than air and may travel along the ground. Distant ignition is possible. Run off to sewers and drains may cause explosions. Avoid all ignition sources.

**Extinguishing Media**
Alcohol stable foam or water spray (large fires); carbon dioxide, dry chemical powder (small fires).

**Hazards from Combustion products**
Burning can produce carbon monoxide and/or carbon dioxide

**Precautions & Equipment for Fire Fighters**
On burning may emit toxic fumes including carbon monoxide and carbon dioxide. Remove containers from path of fire. Heating can cause expansion and rupture of containers. Keep containers cool with water spray. Firefighters should wear self-contained breathing apparatus with full face mask and protective clothing if exposure to vapour or combustion products is likely. Vapour is heavier than air and may travel along the ground. Distant ignition is possible.

**Hazchem Code**
2[Y]E

## 6. Accidental Release Measure

**Spills and Disposal**
Eliminate all possible sources of ignition – no smoking. Take precautionary measures against static discharges. Ventilate area well. In case of large spills, wear protective clothing to prevent skin & eye contact and inhalation of vapours. Contain using sand or earth and use an inert absorbent (sand, vermiculite) where appropriate. Collect and seal in properly labelled containers for disposal. Wash area down with excess water. At very low concentration, this product is biodegradable. Spills can be converted to non-flammable waste by dilution with water.

## 7. Handling and Storage

**Safe Handling Practices**
UN number 1219. Classified 3 PGII (Highly Flammable Liquid). Dangerous substance for the purpose of transport. Refer to appropriate State Regulations for storage and transport requirements. Rinse empty containers with water prior to disposal or re-cycling.

**Storage**
Should not be stored or transported with flammable gases, explosives, spontaneously combustible substances, oxidising agents, halogens, aldehydes or foodstuffs. Store away from sources of heat or ignition. Store below 25°C. Store in a cool, well-ventilated area and keep containers closed, which are not in use, to avoid evaporation.

## 8. Exposure Controls; Personal Protection

**Exposure Limits:**
There are no known exposure limits for Isopropyl Alcohol 70% but the following Threshold Limit Values (TLV) for Isopropyl Alcohol 100% should be used: Isopropyl Alcohol TLV 400ppm (983mg/m³) TWA, OSHA & ACGIH; 500ppm STEL, OSHA & ACGIH

TWA Time-weighted average airborne concentration per 8 hour working day per 5 day working week over an entire working life.

STEL Short term exposure limit - average airborne concentration per 15-minute period.

**Engineering Controls**
Local and or mechanical (general) exhaust, fitted with flame and explosion proof electrical fittings. Use with adequate ventilation at all times.

**Personal Protection**
Avoid eye contact. If spillage or splashing is likely to occur during handling, wear splash resistant goggles or face shield (AS/NZS 1336). Use protective gloves – rubber, nitrile PVC or neoprene (AS 2161). Wash hands thoroughly after use. Do not smoke or eat whilst handling.

No respiratory protection is necessary under normal circumstances. Maintain concentration below recommended exposure limit and use adequate ventilation at all times. In high vapour concentration such as empty vessels or confined space, use air supplied hood, or if concentration likely to exceed 500ppm, wear approved organic vapour respirator (AS/NZS 1715 and 1716).
9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance and Odour</td>
<td>A clear aqueous liquid that has a spiritous odour.</td>
</tr>
<tr>
<td>pH</td>
<td>Not known</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>-89.5°C (Isopropyl Alcohol 100%)</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>33mmHg at 20°C (Isopropyl Alcohol 100%)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Miscible</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>2.1 (Isopropyl Alcohol 100%)</td>
</tr>
<tr>
<td>Specific Gravity or Density</td>
<td>0.869 – 0.894 g/mL</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>82.4°C (Isopropyl Alcohol 100%)</td>
</tr>
<tr>
<td>Flash point</td>
<td>12°C (Isopropyl Alcohol 100%)</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Heat, sparks, flame and build-up of static electricity.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Will react with strong oxidising agents.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Burning can produce carbon monoxide and/or carbon dioxide.</td>
</tr>
</tbody>
</table>

11. Toxicological Information

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Irritating to respiratory tract and mucous membranes. Inhalation of the vapour may cause coughing and chest discomfort. High concentrations of vapour may cause headache and drowsiness.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Ingestion can lead to drowsiness, unconsciousness, abdominal discomfort, nausea, vomiting and diarrhoea. May be toxic at amounts over 130g (for 100%).</td>
</tr>
<tr>
<td>Skin</td>
<td>Prolonged skin contact can cause irritation. May exacerbate existing dermatological conditions.</td>
</tr>
<tr>
<td>Eye</td>
<td>Vapour may irritate the eyes (at concentrations above 400ppm for 100%), causing stinging and discomfort or pain. Liquid and mists may cause redness or corneal injury.</td>
</tr>
</tbody>
</table>

Acute toxicity (for 100% Isopropyl Alcohol)

- LD50/oral/rat: 4396 mg/kg; LD50/dermal/rat: 12870 mg/kg;
- LC50/inhalation/rat: 72.6mg/l/4 h.

Not listed as a carcinogen.

12. Ecological Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility in soil</td>
<td>No data available.</td>
</tr>
<tr>
<td>Persistence and Degradability</td>
<td>Degree of elimination: &gt;90%; Evaluation: readily biodegradable</td>
</tr>
<tr>
<td>Ecotoxicity: (for 100% Isopropyl Alcohol)</td>
<td>Toxicity to fish (acute): LC50/fathead minnow: 11130 mg/l/96 h</td>
</tr>
</tbody>
</table>

13. Disposal Considerations

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal Methods &amp; Containers</td>
<td>Waste material may be incinerated under controlled conditions where permitted. Refer to local Waste Management Authority Regulations for other approved methods. Empty containers should be decontaminated by rinsing with water prior to disposal or recycling. Product must be contained and not disposed of in sewerage systems, drains or waterways. Advise flammable nature.</td>
</tr>
</tbody>
</table>
14. Transport Information

UN Number: 1219
UN Proper Shipping Name: Isopropanol (Isopropyl Alcohol)
DG Class & Subsidiary Risk: 3
Packing Group: II
Hazchem Code: 2[Y]E

15. Regulatory Information

Poisons Schedule: Not scheduled

16. Other Information

References: Iso Propanol MSDS-046, CSR 10/2008

Australian Standards References

AS 1020 The Control of Undesirable Static Electricity
AS 1076 Code of Practice For Selection, Installation and Maintenance of Electrical Apparatus and Associated Equipment for Use in Explosive Atmospheres (Other than mining applications) – Parts 1 To 13
AS/NZS 1336 Recommended Practices for Occupational Eye Protection.
AS/NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices.
AS/NZS 1716 Respiratory Protective Devices.
AS 1940 The Storage and Handling of Flammable and Combustible Liquids.
AS 2161 Industrial Safety Gloves and Mittens (excluding electrical and medical gloves).
AS 2380 Electrical equipment for explosive atmospheres – Explosion Protection Techniques (Parts 1-9)
AS 3000 Electrical Installations (known as the Australian/New Zealand Wiring Rules).

END OF MSDS